AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions and listings of claims in the application.

Listing of Claims

1.   (Canceled)

2.   (Currently Amended) The method. of claim 17, further comprising measuring, by the receiving entity, a quality level of a link between the transmitting entity and the receiving entity, and wherein the step of sending the retransmission mode preference indicator includes sending from the receiving entity to the transmitting entity, at least one link quality indicator indicating the quality level of the link.

3.   (Currently Amended) The method of claim 18, wherein the steps of selecting an MCS for encoding the additional subblocks are performed at the receiving entity, and the step of sending the retransmission mode preference indicator to the transmitting entity includes sending a selected MCS to the transmitting entity for encoding the additional subblocks of data.

4.   (Currently Amended) The method of claim 18, wherein the steps of selecting an MCS for encoding the additional subblocks are performed at the transmitting entity based upon the retransmission mode preference indicator received from the receiving entity.

5.   (Canceled)

6.   (Currently Amended) The method of claim 18, further comprising measuring, by the receiving entity, a quality level of a link between the transmitting entity and the receiving. entity, and sending a link quality indicator to the transmitting

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entity, wherein the steps of selecting an MCS for encoding the additional subblocks are performed at the transmitting entity and are based upon the ~~retransmission~~ mode preference indicator and the link quality indicator received from the receiving entity.

7.   (Canceled)

8.   (Currently Amended) The method of claim 3, wherein said transmitting entity encodes new data blocks utilizing a first MCS based on the selected MCS received from the receiving entity, and encodes the additional redundant subblocks of data utilizing a second MCS based on the ~~retransmission~~ mode preference indicator.

9.   (Currently Amended) A method of transferring information between a transmitting entity and a receiving entity comprising the steps of:

identifying an initial modulation/coding scheme (MCS) in a command sent from the receiving entity to the transmitting entity;

encoding initial blocks of data utilizing the identified initial MCS;

transmitting the encoded initial blocks of data from the transmitting entity to the receiving entity;

sending indications from the receiving entity to the transmitting entity identifying initial blocks of data that could not be decoded;

sending a segmentation indicator from the receiving entity to the transmitting entity indicating whether the identified data blocks that the receiving entity could not decode should be resegmented by the transmitting entity prior to retransmission to the receiving entity;

selecting by the transmitting entity, a retransmission MCS to be utilized for retransmitting the data blocks that the receiving entity could not decode;

if the selected retransmission MCS is different from the initial MCS, re-encoding by the transmitting entity utilizing the selected retransmission MCS, the data blocks that the receiving entity could not decode; and

retransmitting the re-encoded data blocks to the receiving entity, said retransmitted data blocks being resegmented or not resegmented in accordance with the segmentation indicator.

10-11.   (Canceled)

12.   (Previously Presented) The method of claim 33, wherein the segmentation indicator and the retransmission MCS are sent from the receiving entity to the transmitting entity in a single message.

13.   (Previously Presented) The method of claim 9, wherein the step of sending the segmentation indicator includes sending at least one link quality measurement from the receiving entity to the transmitting entity.

14.   (Canceled)

15.   (Currently Amended) A receiver for receiving encoded subblocks of data and providing decoded data blocks to an end user, said receiver comprising:

[[a]] a subblock memory for storing received initial subblocks of data blocks that the receiver could not decode;

a receive buffer for storing successfully decoded data blocks;

a decoder for decoding the received initial subblocks of data blocks and determining whether any of the received initial subblocks of data blocks cannot be decoded, said decoder storing the subblocks of data that cannot be decoded in the subblock memory, and passing the decoded data blocks to the receive buffer;

means for determining whether the receiver subblock memory has sufficient resources memory space available for the receiver to utilize an incremental redundancy operating mode to obtain additional redundant subblocks of data for additional attempts to decode the initial subblocks of data blocks that could not be decoded, wherein, in the incremental redundancy operating mode, additional redundant subblocks of data associated with the initial subblocks of data blocks that could not be decoded are

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repeatedly retransmitted to the receiver until the receiver successfully decodes the subblocks of data blocks that could not be decoded, said receiver combining the additional redundant subblocks of data with the initial subblocks of data blocks in the subblock memory, and utilizing a joint decoding process; and

means for transmitting a message to a transmitter indicating a preferred operating mode, said message indicating that the preferred operating mode is the incremental redundancy mode if the receiver subblock memory has sufficient resources memory space available to store and jointly decode the received initial subblocks of data blocks as well as the additional redundant subblocks of data, and said message indicating that the preferred operating mode is a non-incremental redundancy mode if the receiver subblock memory does not have sufficient resources memory space to utilize the incremental redundancy operating mode.

16. (Currently Amended) The receiver of claim 15, further comprising: means for combining wherein the received initial subblocks of data blocks and the additional redundant subblocks of data are stored in the subblock memory when the incremental redundancy operating mode is being utilized; and means for, and the decoder combines and jointly decoding decodes the combined data blocks and stored subblocks of data.

17. (Currently Amended) A method of transferring information between a transmitting entity and a receiving entity comprising the steps of:

encoding blocks of data utilizing an initial modulation/coding scheme (MCS), thereby generating encoded data blocks;

generating from each of the encoded data blocks, at least one initial subblock of data, each initial subblock containing all or a subset of the bits of the encoded data block;

transmitting for each of the encoded data blocks, the initial subblocks of data from the transmitting entity to the receiving entity;

receiving and attempting to decode by the receiving entity, the encoded initial subblocks of data;

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storing the <u>encoded</u> initial subblocks of data <u>that cannot be decoded in a</u> <u>subblock memory</u> at the receiving entity;

determining, at the receiving entity, whether ~~available resources~~ <u>the subblock</u> <u>memory</u> of the receiving entity will support reception of additional redundant subblocks of data utilizing an incremental redundancy mode in which the additional redundant subblocks are repeatedly retransmitted to the receiving entity <u>and stored in the subblock</u> <u>memory</u> until the receiving entity successfully decodes the initial subblocks of data in a joint decoding process with the additional redundant subblocks; and

sending a ~~retransmission~~ <u>mode preference</u> indicator from the receiving entity to the transmitting entity, said ~~retransmission~~ <u>mode preference</u> indicator indicating whether or not operation in the incremental redundancy mode is preferred, said incremental redundancy mode being preferred if the ~~available resources~~ <u>subblock memory</u> of the receiving entity will support reception of additional redundant subblocks of data utilizing the incremental redundancy mode.

18.   (Currently Amended) The method of claim 17, further comprising the steps of:

if the ~~retransmission~~ <u>mode preference</u> indicator indicates that operation in the incremental redundancy mode is preferred, selecting an MCS for encoding and generating the additional redundant subblocks taking into account that the receiving entity can perform joint decoding of an initial subblock with its associated additional redundant subblocks of data; and

if the ~~retransmission~~ <u>mode preference</u> indicator indicates that operation in the incremental redundancy mode is not preferred, selecting the MCS for encoding and generating the additional redundant subblocks taking into account that the receiver cannot perform joint decoding of an initial subblock with its associated additional redundant subblocks of data, but must decode the data block that could not be decoded utilizing a single additional redundant subblock of data.

19.   (Previously Presented) The method of claim 18, wherein the steps of selecting an MCS for encoding and generating the additional redundant subblocks also include selecting an MCS for encoding future initial subblocks of data to be transmitted from the transmitting entity to the receiving entity.

20.   (Currently Amended) A method in a receiver ~~for decoding received blocks of data~~ of selecting an operating mode utilized by a remote transmitter to transmit encoded subblocks of data to the receiver, said operating mode being selected from at least two different operating modes, said method comprising the steps of:

receiving and attempting to decode initial subblocks of data;

storing in a subblock memory, received initial subblocks of data ~~blocks in a memory~~ that could not be decoded;

determining whether the ~~receiver~~ subblock memory has sufficient ~~resources~~ memory space available for the receiver to utilize an incremental redundancy operating mode to obtain additional redundant subblocks of data;

sending a message to [[a]] the transmitter indicating that the incremental redundancy operating mode is preferred, upon determining that the ~~receiver~~ subblock memory has sufficient ~~resources~~ memory space available to utilize the incremental redundancy operating mode; and

sending a message to the transmitter indicating that a non-incremental redundancy operating mode is preferred, upon determining that the ~~receiver~~ subblock memory does not have sufficient ~~resources~~ memory space available to utilize the incremental redundancy operating mode.

21.   (Currently Amended) The method of claim 20, wherein the message to the transmitter indicates that the incremental redundancy operating mode is preferred, and the method further comprises the steps of:

receiving additional redundant subblocks of data by the receiver;

~~combining~~ storing the received additional redundant subblocks of data with the initial subblocks of data ~~blocks~~ in the subblock memory; and

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utilizing a joint decoding process to combine and decode the ~~combined~~ stored initial subblocks of data ~~blocks~~ and additional redundant subblocks of data.

22.   (Currently Amended) A method in a transceiver for encoding blocks of data and transmitting said encoded data blocks to an external receiver, said method comprising the steps of:

.   encoding blocks of data utilizing an initial modulation/coding scheme (MCS), thereby generating encoded data blocks;

generating from each of the encoded data blocks, at least one initial subblock of data, each initial subblock containing all or a subset of the bits of the encoded data block;

transmitting for each of the encoded data blocks, the initial subblocks of data to the external receiver;

receiving a message from the external receiver identifying subblocks of data that the receiver could not decode;

receiving a message from the external receiver indicating a preferred operating mode for ~~transmitting~~ retransmitting to the receiver, the identified subblocks as additional redundant subblocks of data ~~to the receiver~~;

encoding the additional redundant subblocks of data utilizing an MCS appropriate for the preferred operating mode indicated in the message from the receiver; and

transmitting the encoded additional redundant subblocks of data to the external receiver utilizing the preferred operating mode and utilizing the MCS appropriate for the preferred operating mode.

23.   (Previously Presented) The method of claim 22, wherein the step of encoding the additional redundant subblocks of data includes encoding the additional redundant subblocks of data with an MCS appropriate for joint decoding of an initial subblock with its associated additional redundant subblocks, if the message from the external receiver indicates that the preferred operating mode is an incremental redundancy mode.

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24. (Previously Presented) The method of claim 22, wherein the step of encoding the additional redundant subblocks of data includes encoding the additional redundant subblocks of data with an MCS appropriate for decoding utilizing a single additional redundant subblock of data, if the message from the external receiver indicates that the preferred operating mode is a non-incremental redundancy mode.

25. (Previously Presented) The method of claim 22, wherein the steps of selecting an MCS for encoding the additional redundant subblocks also include selecting an MCS for encoding future initial subblocks of data to be transmitted from the transmitting entity to the receiving entity.

26. (Currently Amended) The method of claim 9, wherein the receiving entity sets the segmentation indicator to indicate that retransmitted data blocks should not be resegmented if a subblock memory in the receiving entity has sufficient resources memory space available to support an incremental redundancy mode of retransmitting the data blocks that could not be decoded.

27. (Currently Amended) The method of claim 9, wherein the receiving entity sets the segmentation indicator to indicate that retransmitted data blocks should be resegmented if a subblock memory in the receiving entity does not have sufficient resources memory space available to support an incremental redundancy mode of retransmitting the data blocks that could not be decoded.

28. (Currently Amended) A transceiver for encoding blocks of data and transmitting said encoded data blocks to an external receiver, said transceiver comprising:

an encoder for encoding blocks of data utilizing a modulation/coding scheme (MCS) selected from a plurality of MCSs that the encoder is capable of utilizing;

means for generating from each of the encoded data blocks, at least one initial subblock of data, each initial subblock containing all or a subset of the bits of the encoded data block;

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means for transmitting the initial subblocks of data to the external receiver, and if required, transmitting additional redundant subblocks of data to the receiver;

means for receiving a message from the external receiver identifying subblocks of data that the receiver could not decode;

means for receiving a message from the external receiver indicating a preferred operating mode for ~~transmitting~~ retransmitting to the receiver, the identified subblocks as additional redundant subblocks of data ~~associated with data blocks that the receiver could not decode~~; and

means within the encoder for encoding the additional redundant subblocks of data utilizing an MCS appropriate for the preferred operating mode indicated in the message from the receiver, and providing the encoded additional redundant subblocks of data to the transmitting means for transmission to the external receiver utilizing the preferred operating mode and utilizing the MCS appropriate for the preferred operating mode.

29.   (Previously Presented) The transceiver of claim 28, wherein the steps of selecting an MCS for encoding the additional redundant subblocks also include selecting an MCS for encoding future initial subblocks of data to be transmitted from the transmitting entity to the receiving entity.

30.   (Previously Presented) The method of claim 9, wherein the selecting step includes the steps of:

selecting the retransmission MCS according to a first predetermined rule if the segmentation indicator indicates that the retransmitted data blocks are not to be resegmented; and

selecting the retransmission MCS according to a second predetermined rule if the segmentation indicator indicates that the retransmitted data blocks are to be resegmented.

31.   (Previously Presented) The method of claim 30, wherein the selecting step includes the steps of:

selecting the initial MCS used for the initial transmission of the data blocks, or another MCS that does not require resegmentation of the block of data, if the segmentation indicator indicates that the retransmitted data blocks are not to be resegmented; and

selecting an MCS that may be more robust or less robust than the initial MCS, and may require resegmentation of the initial blocks of data, if the segmentation indicator indicates that the retransmitted data blocks are to be resegmented.

32.   (Previously Presented) The method of claim 9, further comprising the steps of:

measuring, by the receiving entity, a quality level of a link between the transmitting entity and the receiving entity; and

sending from the receiving entity to the transmitting entity, at least one link quality indicator indicating the quality level of the link;

wherein the step of selecting by the transmitting entity, a retransmission MCS includes selecting a retransmission MCS based upon the link quality indicator and the segmentation indicator.

33.   (Currently Amended) A method of transferring information between a transmitting entity and a receiving entity comprising the steps of:

identifying an initial modulation/coding scheme (MCS) in a command sent from the receiving entity to the transmitting entity;

encoding by the transmitting entity, initial blocks of data utilizing the identified initial MCS, thereby generating encoded initial subblocks of data;

transmitting the encoded initial subblocks of data from the transmitting entity to the receiving entity;

at the receiving entity, receiving and attempting to decode the encoded initial subblocks of data;

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sending indications from the receiving entity to the transmitting entity identifying initial subblocks of data that could not be decoded;

sending a segmentation indicator from the receiving entity to the transmitting entity indicating whether the identified subblocks of data blocks that the receiving entity could not decode should be resegmented by the transmitting entity prior to retransmission to the receiving entity;

selecting by the receiving entity, a retransmission MCS to be utilized by the transmitting entity for retransmitting the subblocks of data blocks that the receiving entity could not decode;

sending the selected retransmission MCS from the receiving entity to the transmitting entity;

if the selected retransmission MCS is different from the initial MCS, re-encoding by the transmitting entity utilizing the selected retransmission MCS, the subblocks of data blocks that the receiving entity could not decode; and

retransmitting the re-encoded subblocks of data blocks to the receiving entity, said retransmitted data blocks being resegmented or not resegmented in accordance with the segmentation indicator.

34.   (Currently Amended) The method of claim 17, further comprising, after receiving and storing attempting to decode the initial subblocks of data at the receiving entity, the step of determining at the receiving entity whether any of the data blocks cannot be decoded from the received initial subblocks of data, and wherein, the step of determining whether available resources the subblock memory of the receiving entity will support reception of additional redundant subblocks includes, upon determining that at least one of the initial subblocks of data blocks cannot be decoded, determining whether available resources the subblock memory of the receiving entity will support reception of additional redundant subblocks of data containing additional redundant bits of the subblocks of data blocks that cannot be decoded.

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35.   (New) The method of claim 33, further comprising, before sending the segmentation indicator from the receiving entity to the transmitting entity, the step of determining by the receiving entity whether a subblock memory in the receiving entity has sufficient memory space available for the receiving entity to utilize an incremental redundancy operating mode to obtain additional redundant subblocks of data,

wherein the step of sending a segmentation indicator from the receiving entity to the transmitting entity includes sending a segmentation indicator indicating that the identified data blocks should not be resegmented, upon determining that the subblock memory in the receiving entity has sufficient memory space available for the receiving entity to utilize the incremental redundancy operating mode.